

REMARKS

Claim Rejections – 35 USC § 103

Claims 16-18, 20, 22, 34, 37, 38, and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850).

Claims 1, 3, 5, 11, 13, 26, and 29-30 are rejected under 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850).

Claims 2, 12, 19, 21, 28, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850) as applied to the preceding rejected claims, and further in view of Allen (U.S. Patent No. 6,811,267).

Claims 4, 23, 27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850) as applied to the preceding rejected claims, and further in view of Kowarz (U.S. Patent No. 6,411,425).

Claims 8, 31, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850) as applied to claims 1, 3, 5, 11, 13, 16-18, 20, 22, 26, 29, 30, 34, 37, 38, 42 and 43, and further in view of Hewlitt (U.S. Patent No. 6,126,288).

Claims 9, 32, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850) and Hewlitt (U.S. Patent No. 6,126,288) as applied to claims 8, 31, and 39, and further in view of Khosravi (U.S. Patent No. 6,184,926).

Claims 6-7, 14-15, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker (U.S. Patent No. 6,789,903) in view of Hong (U.S. Patent No. 6,799,850) as applied to claims 1, 3, 5, 11, 13, 16-18, 20, 22, 26, 29, 30, 34, 37, 38, 42 and 43, and further in view of Olbrich (U.S. Patent No. 6,840,627).

Allowable Subject Matter

Claims 10, 33, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 11, 16, 26, and 34 herewith are amended. Claim 41 has been canceled.

Reconsideration and allowance of the claims as amended is requested for the following reasons.

The present invention is directed to a laser projector coupled with a camera for obtaining a sensed pixel array by sensing the two-dimensional array of pixels of the image frame formed on the display surface by said image-bearing beam, and a control logic processor. The projection apparatus combination forms an image frame on a display surface, wherein the image frame comprises a two-dimensional array of pixels. The control logic processor compares a sensed pixel array with corresponding image data for the image frame to identify any portion of an image-bearing beam that is obstructed from the display surface and disables pixels within the obstructed portion of the image-bearing beam for a plurality of subsequent image frames. The projector also includes an image modulator for modulating the laser light source to form said image-bearing beam, according to image data; and projection optics for projecting the image-bearing beam toward the display surface to form the image frame.

With regard to independent claims 1, 11, and 26, the Applicant addresses a safety problem with lasers and persons accidentally viewing laser light by disabling an image beam, within an obstructed path caused by the viewer, for the entire portion of the obstructed path. The light from the laser projector is blanked once an obstruction is detected by this same light and, moreover, the light is no longer available for detecting another obstruction. In contrast, Parker uses two light sources, where one forms an image-bearing beam and another detects the presence of an obstruction (i.e., an individual presenter). Therefore, one light source is always available to detect an obstruction, unlike the Applicant's present invention.

Furthermore, should one employ the combined teaching of Parker and Hong, the Applicant's invention would not result, because a detector light still

remains which is contrary to the present invention whereby the detector light is shut off. The applicant has amended independent claims 1, 11 and 26 to further emphasize that the means of detection is shut off entirely after the first frame upon detection, unlike the teaching in Parker where the means for detection is constant. Therefore, the Applicant is electing in the present invention to keep the obstructed region blanked and employs another strategy for reclaiming pixels upon movement of the obstruction, as described on page 9, lines 11-20. The Applicant has added new claim 44 for this purpose.

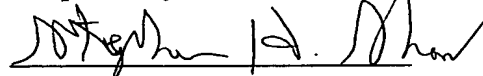
Regarding independent claim 16, the Applicant has included reflected ambient light from the obstruction to distinguish from Parker in that Parker teaches away from using ambient light, because of the failure to generate a usable matte upon detection of an obstruction. See, col. 1, lines 20-23. In addition, new claim 45 has been added to claim the methodology used by the apparatus of claim 16. Regarding claim 34, the Applicant has amended it to include the allowable subject matter of claim 41.

It is believed that independent claims 1, 11, 16, 26, and 34 are unobvious. The remaining claims are dependent from these claims and are considered to be patentable for at least the same reasons.

Applicants have reviewed the cited art made of record and believe that singly or in any suitable combination, they do not render Applicant's claimed invention unpatentable. It is believed that the claims in the application are allowable over the cited art and such allowance is respectfully requested.

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.